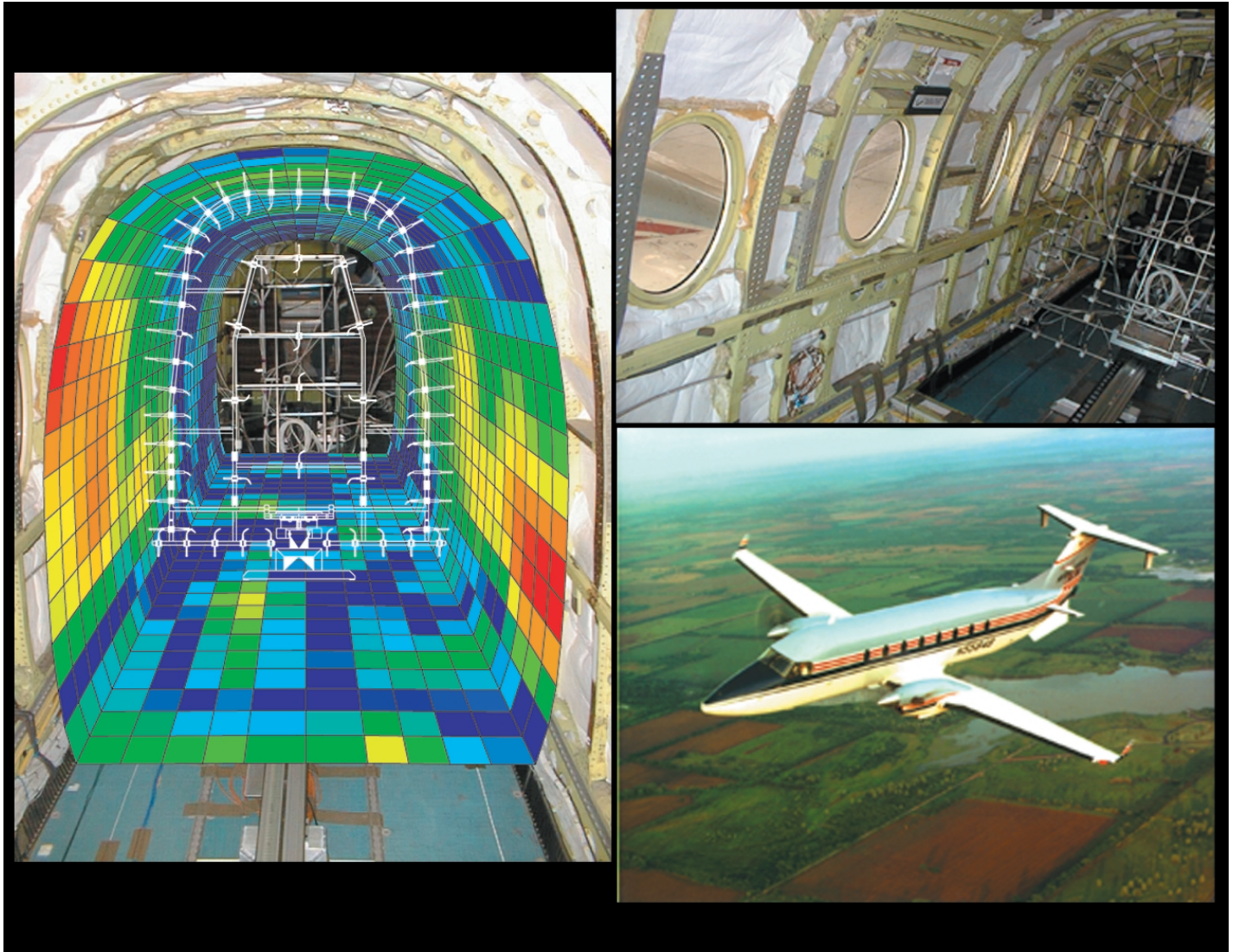


IN-FLIGHT ACOUSTIC HOLOGRAPHY



Before effective methods can be developed to control acoustic noise in enclosed spaces, diagnostic techniques are required to uncover the underlying mechanisms by which the structure/air interactions cause the noise. NRL has been developing powerful diagnostic techniques for these applications based on nearfield acoustic holography (NAH). NRL recently demonstrated the first NAH generated in the interior of an aircraft in flight. These acoustic holograms were then used to reconstruct the interior noise fields and fuselage vibration, identifying the dominant structure-borne paths leading to interior fuselage noise.

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